

DIRECT WRITE APPROACH

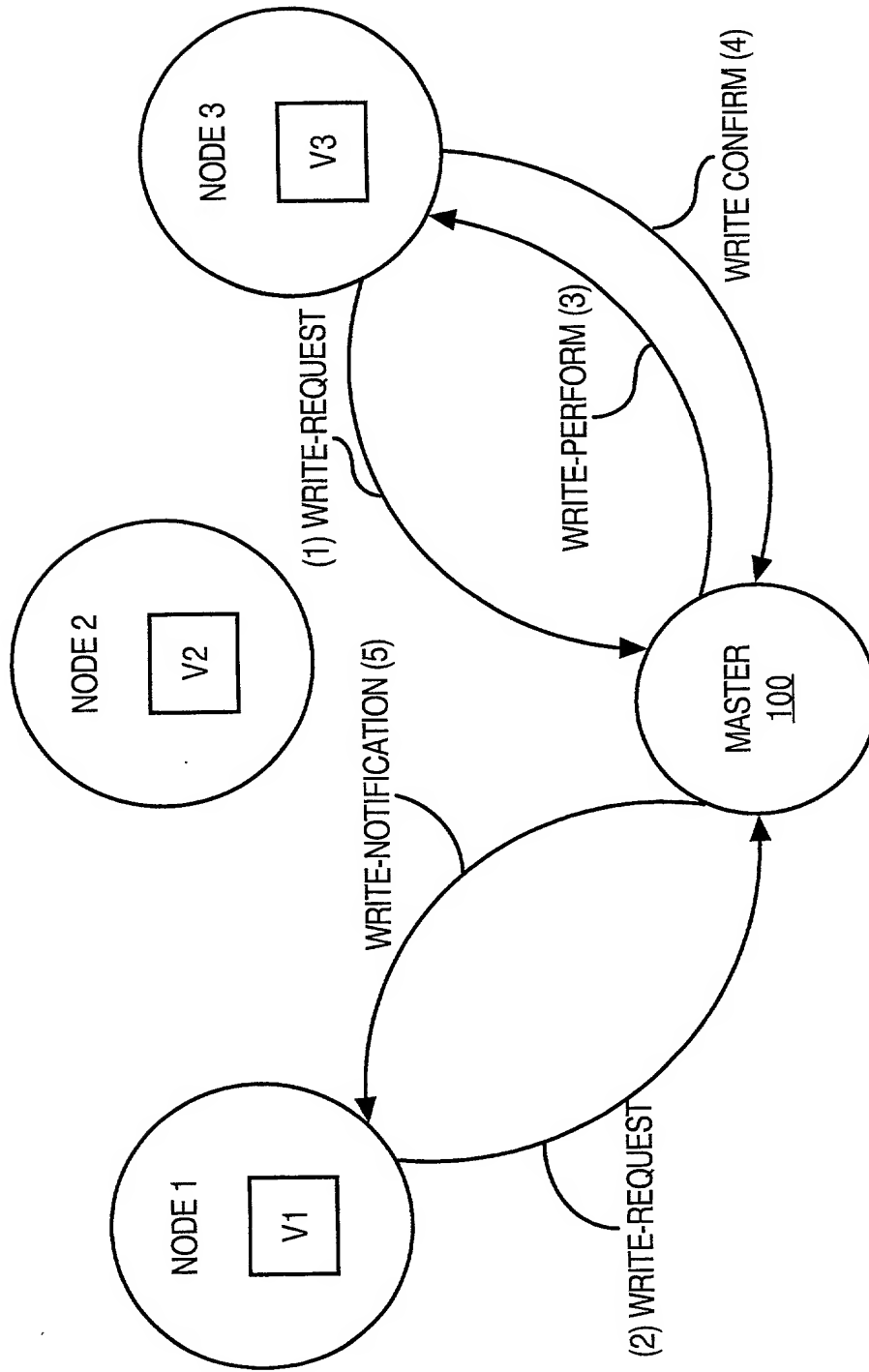


FIG. 1

INDIRECT WRITE APPROACH

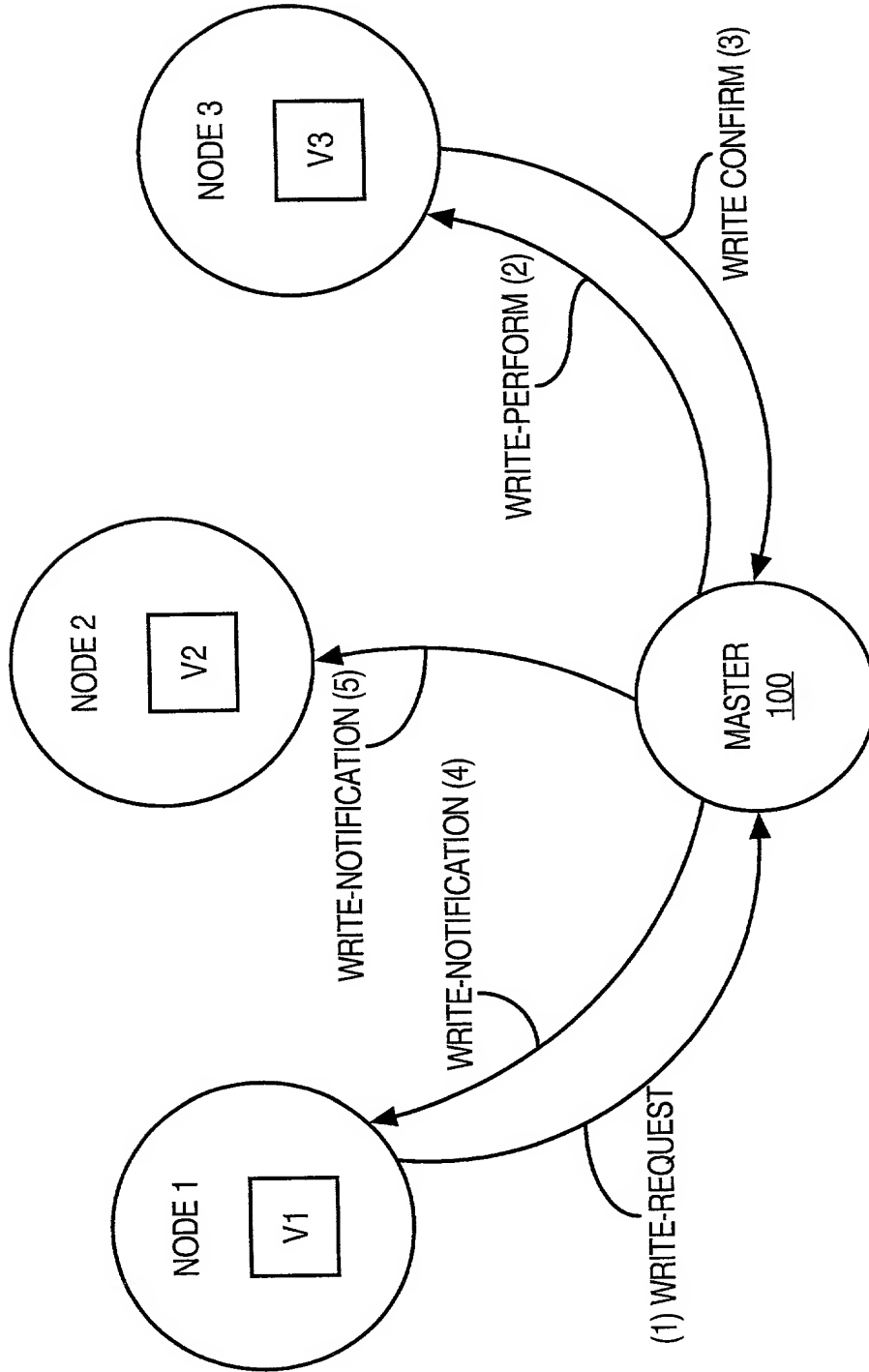


FIG. 2

attorney's prepared

OWNER-BASED WRITES WHEN GLOBAL DIRTY IS FALSE

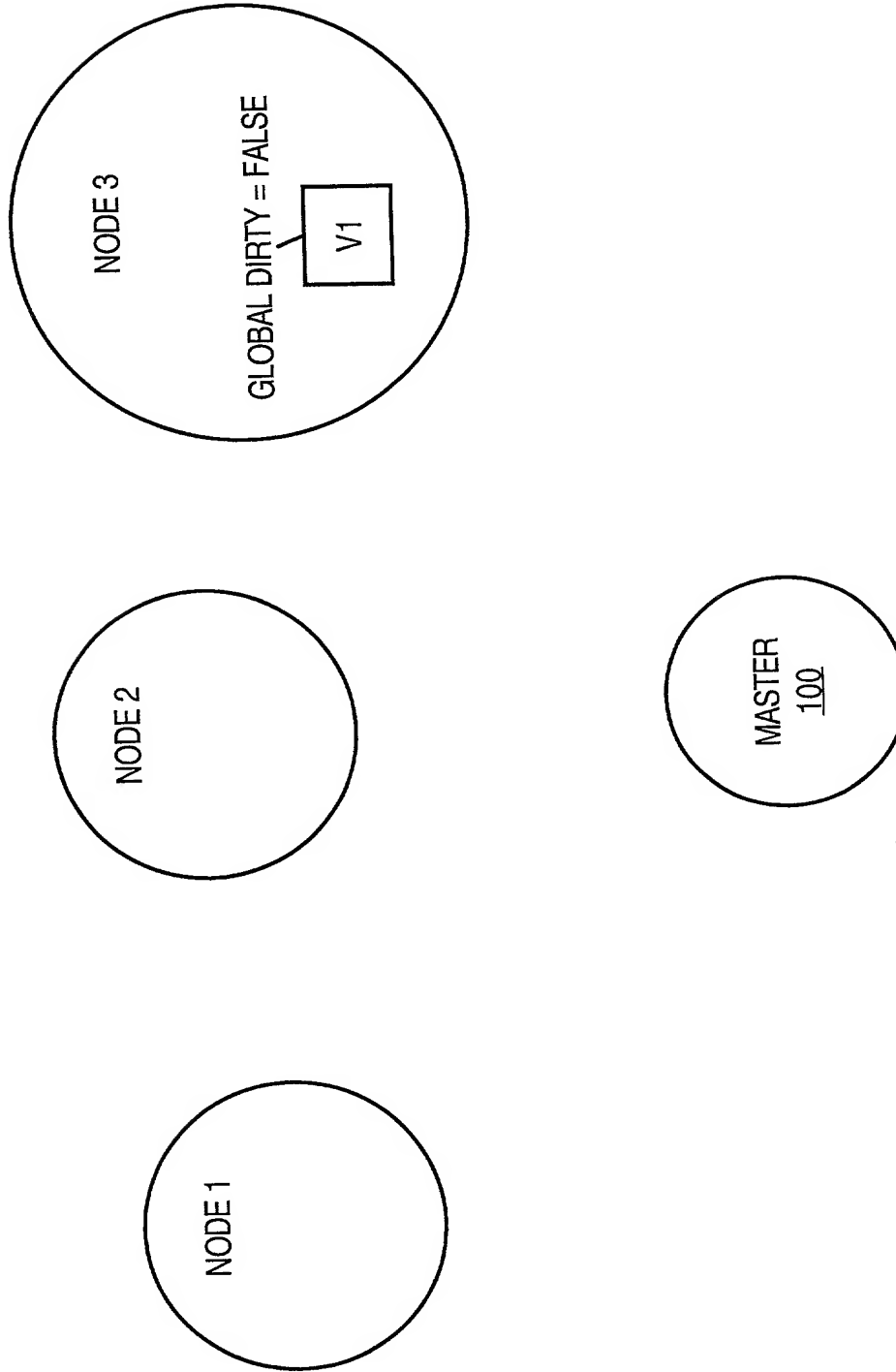


FIG. 3a

OWNER-BASED WRITES WHEN GLOBAL DIRTY IS TRUE

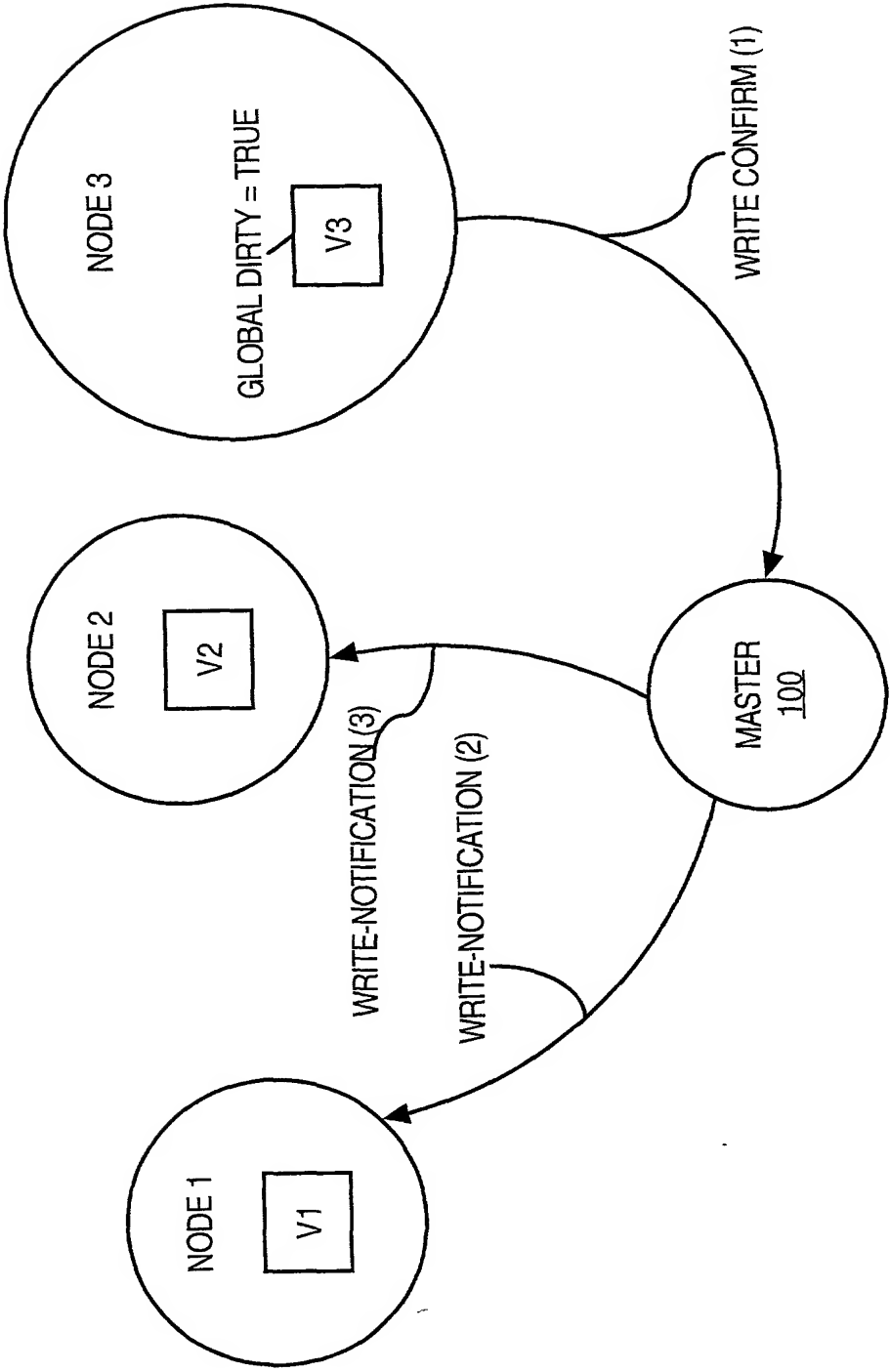


FIG. 3b

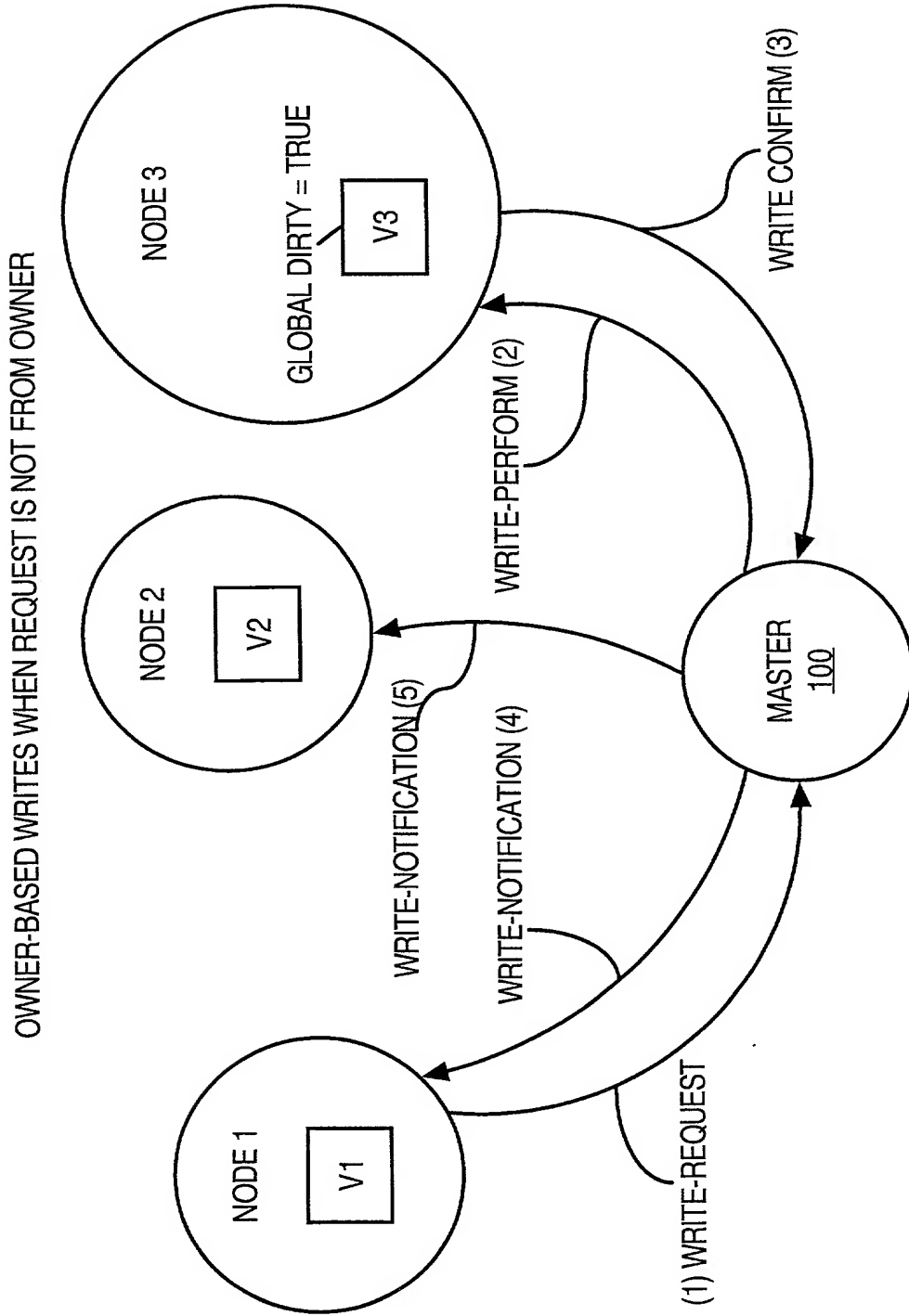


FIG. 3c

ROLE-BASED APPROACH WHEN MODE IS LOCAL

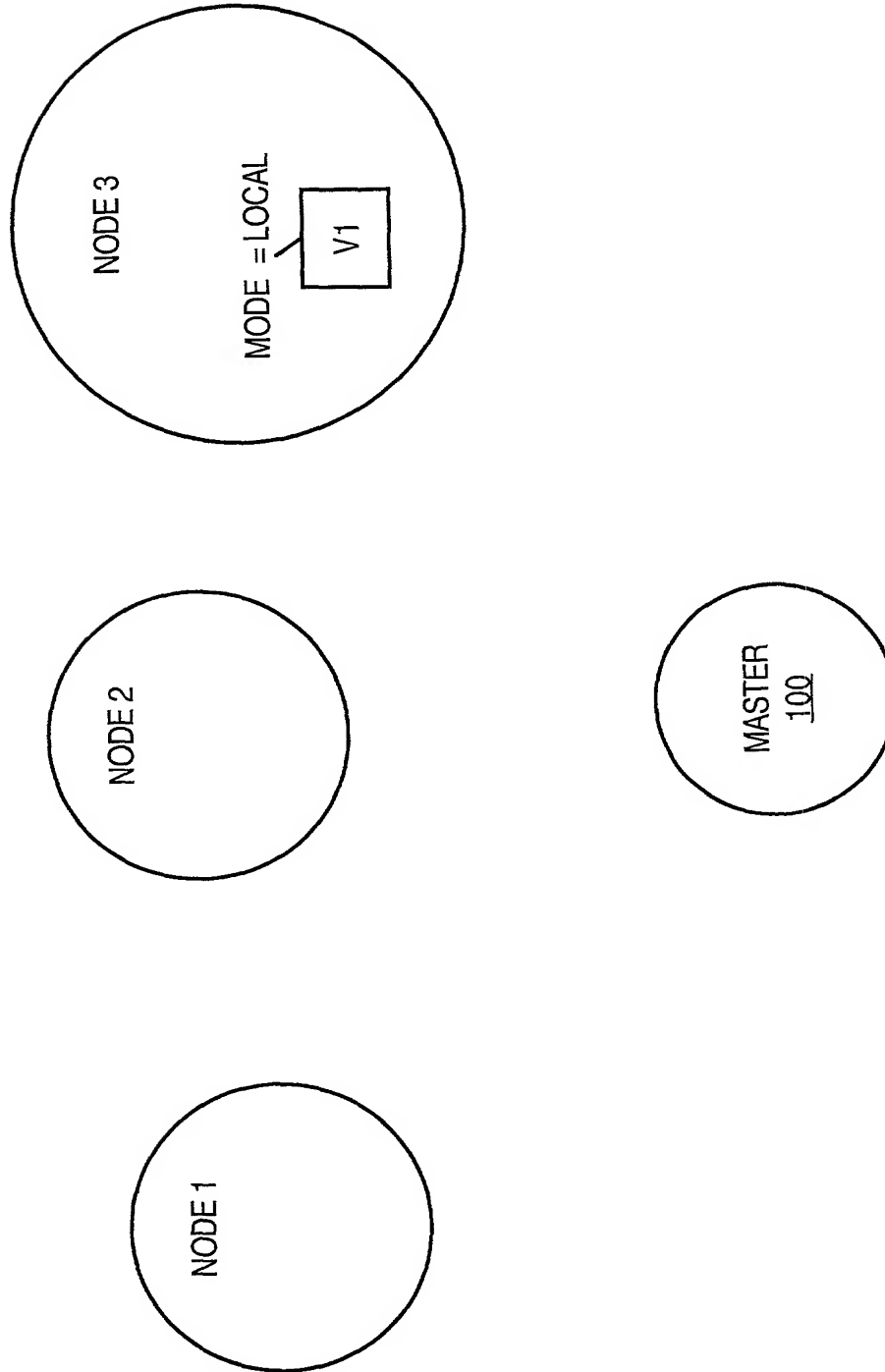


FIG. 4a

ROLE-BASED APPROACH WHEN MODE IS GLOBAL

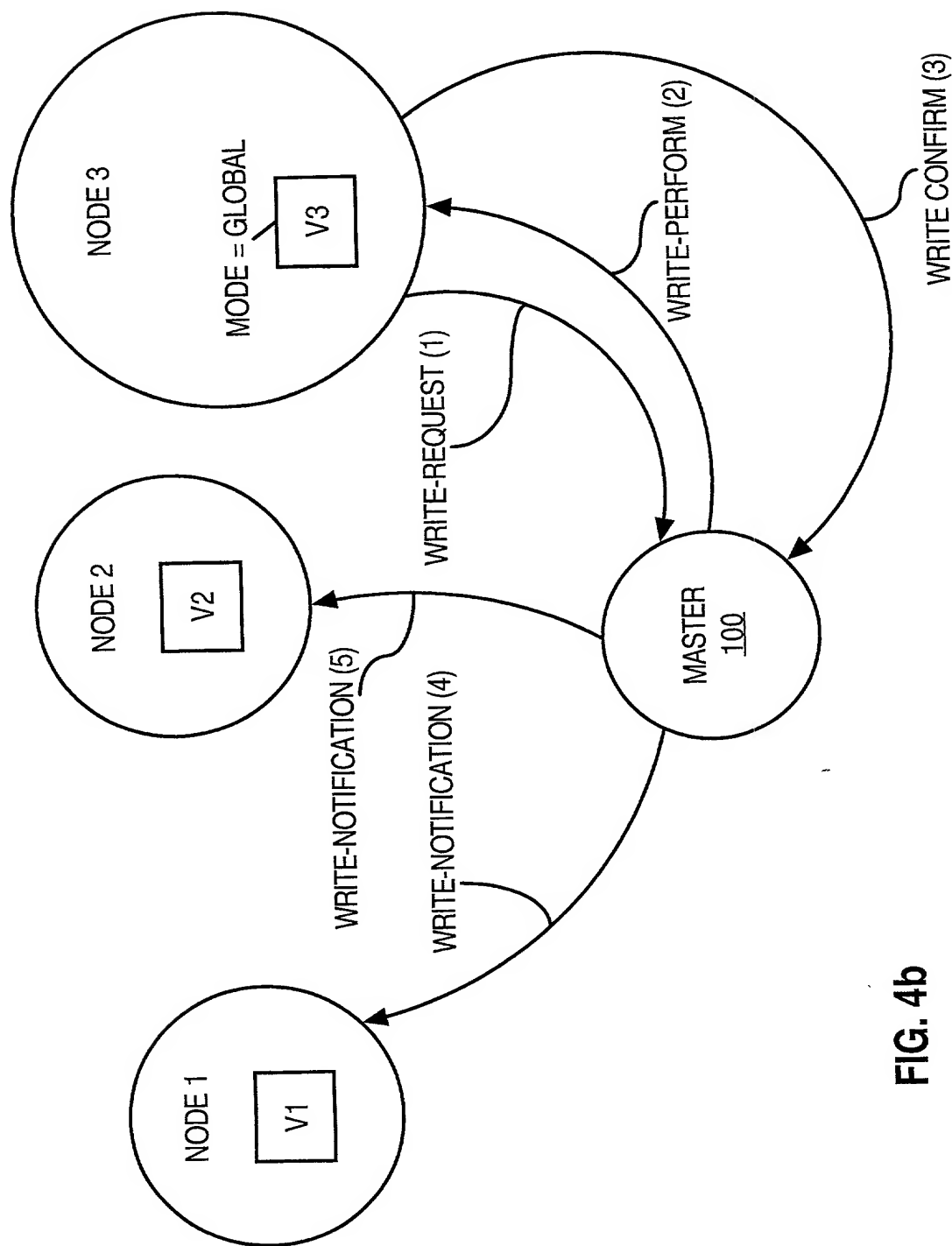


FIG. 4b

ROLE-BASED APPROACH WHEN REQUEST IS NOT FROM EXCLUSIVE LOCK HOLDER

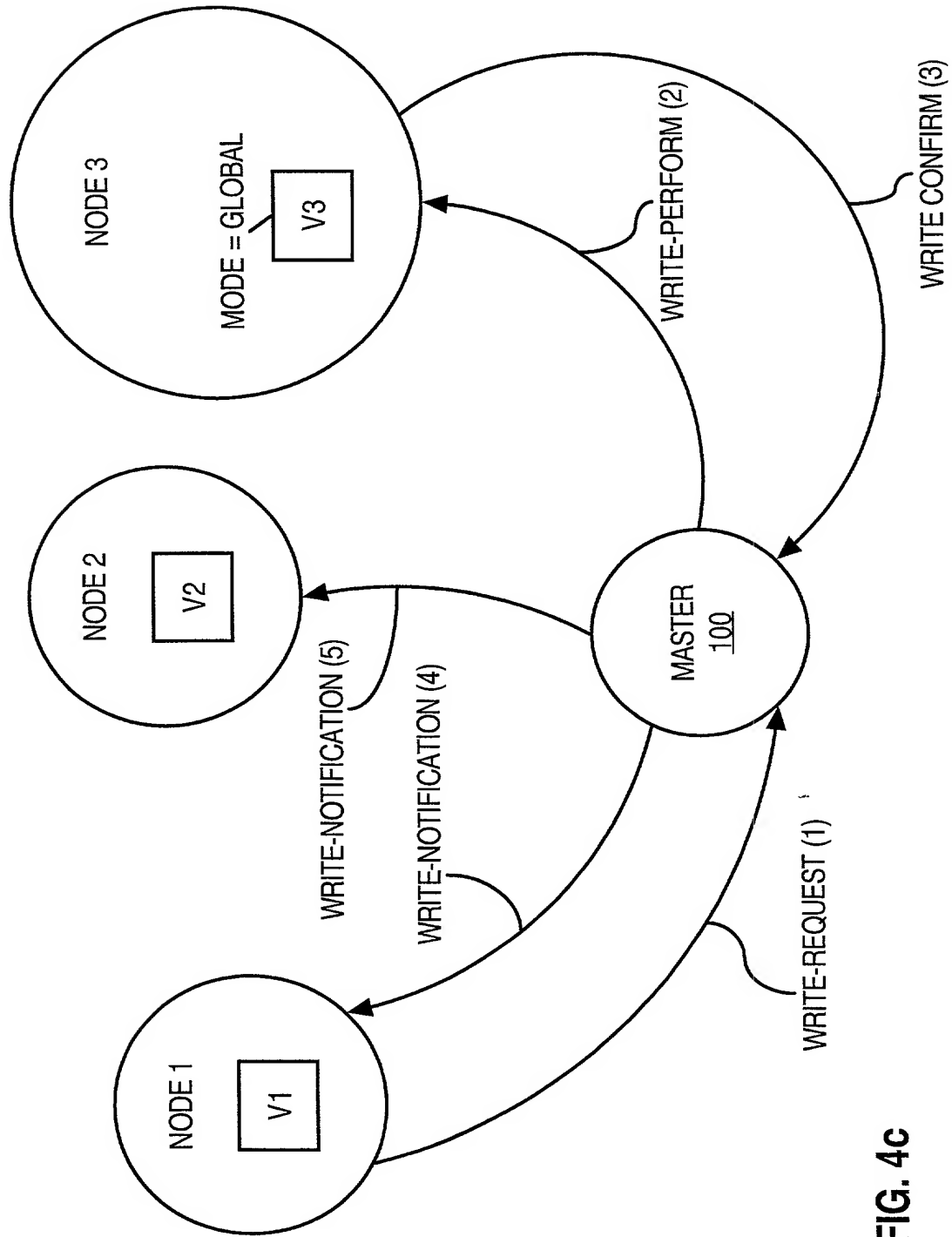


FIG. 4c

attorney's foot



ROLE-BASED APPROACH WITH TRANSFER DURING WRITE OPERATION

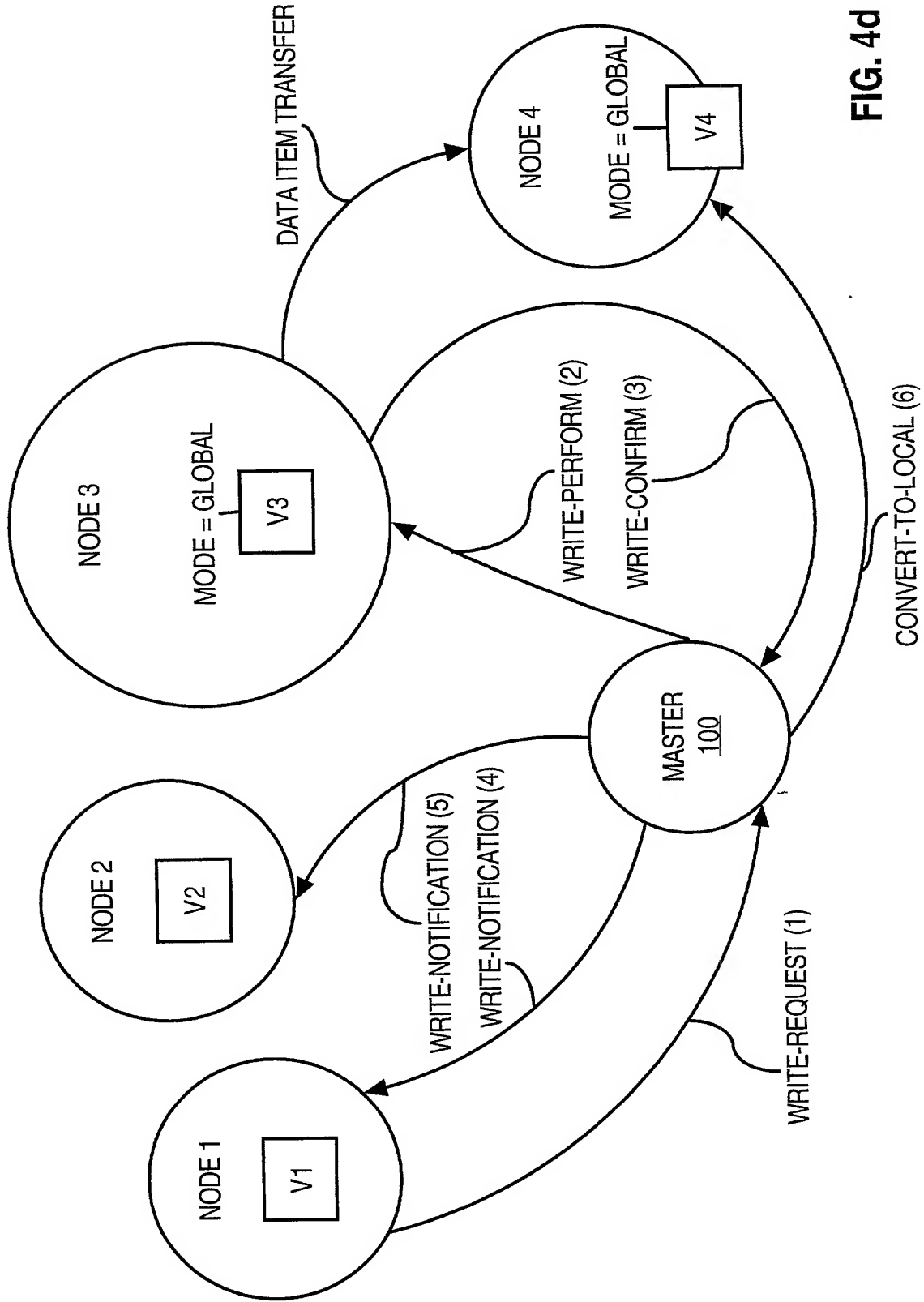


FIG. 4d

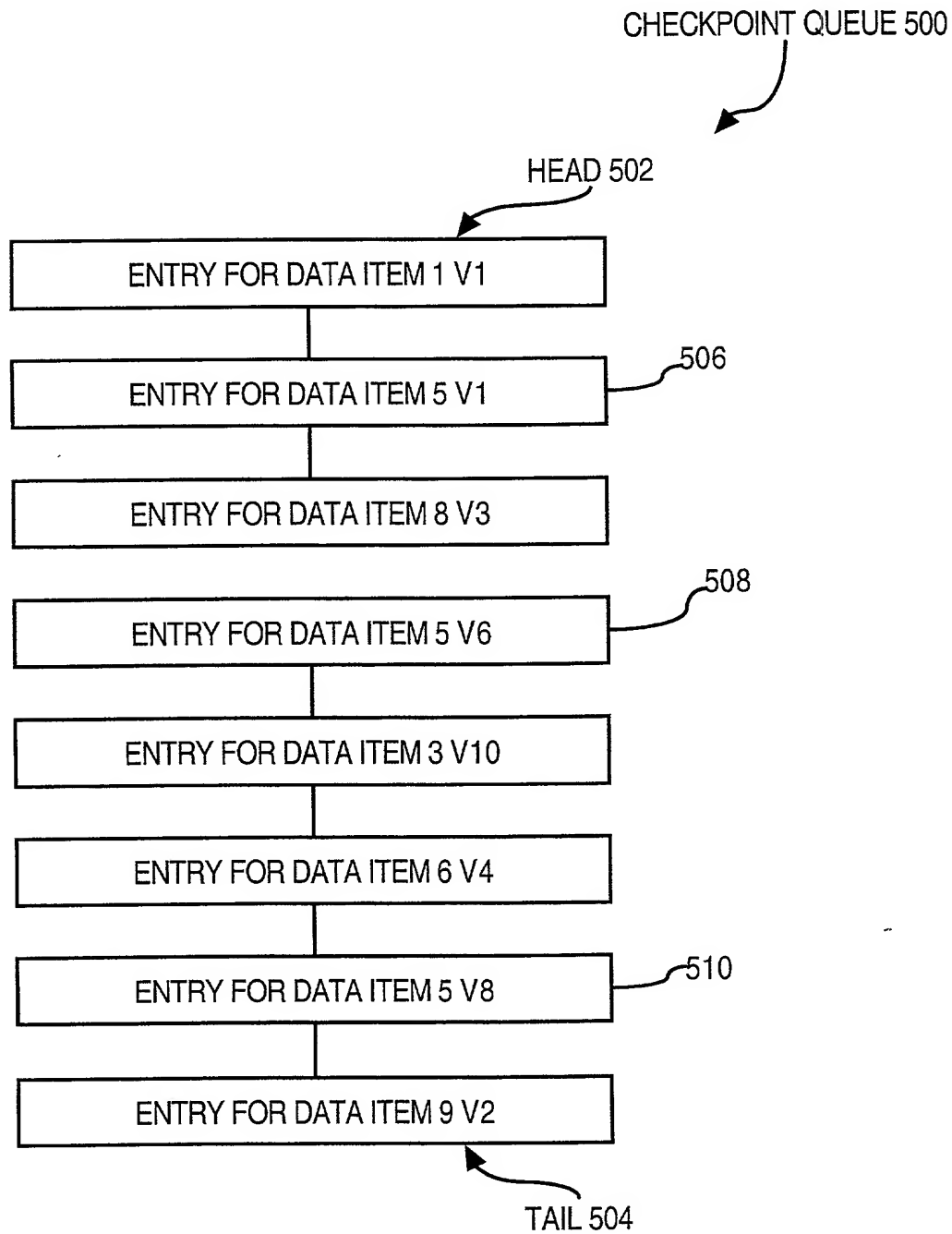


FIG. 5

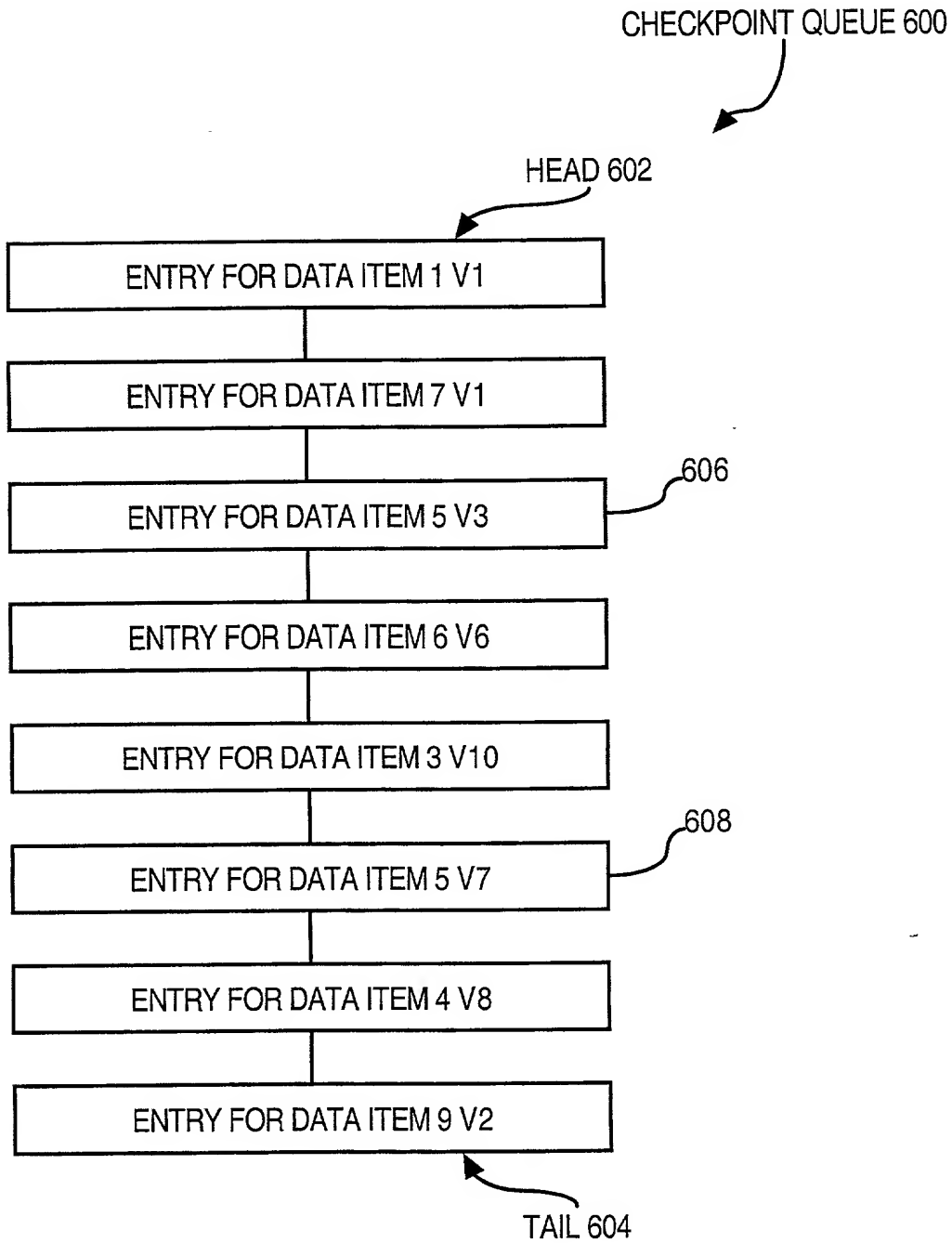


FIG. 6

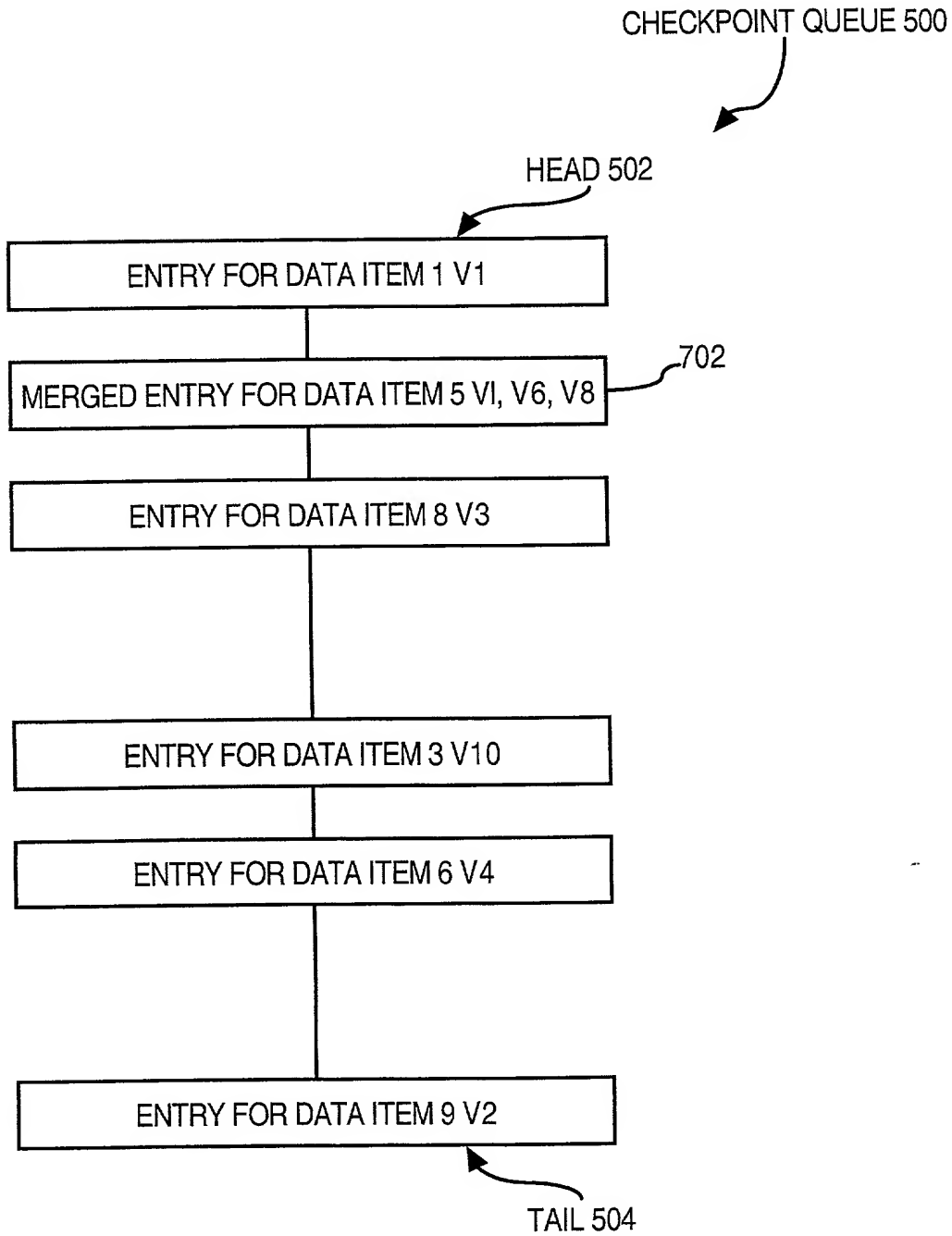
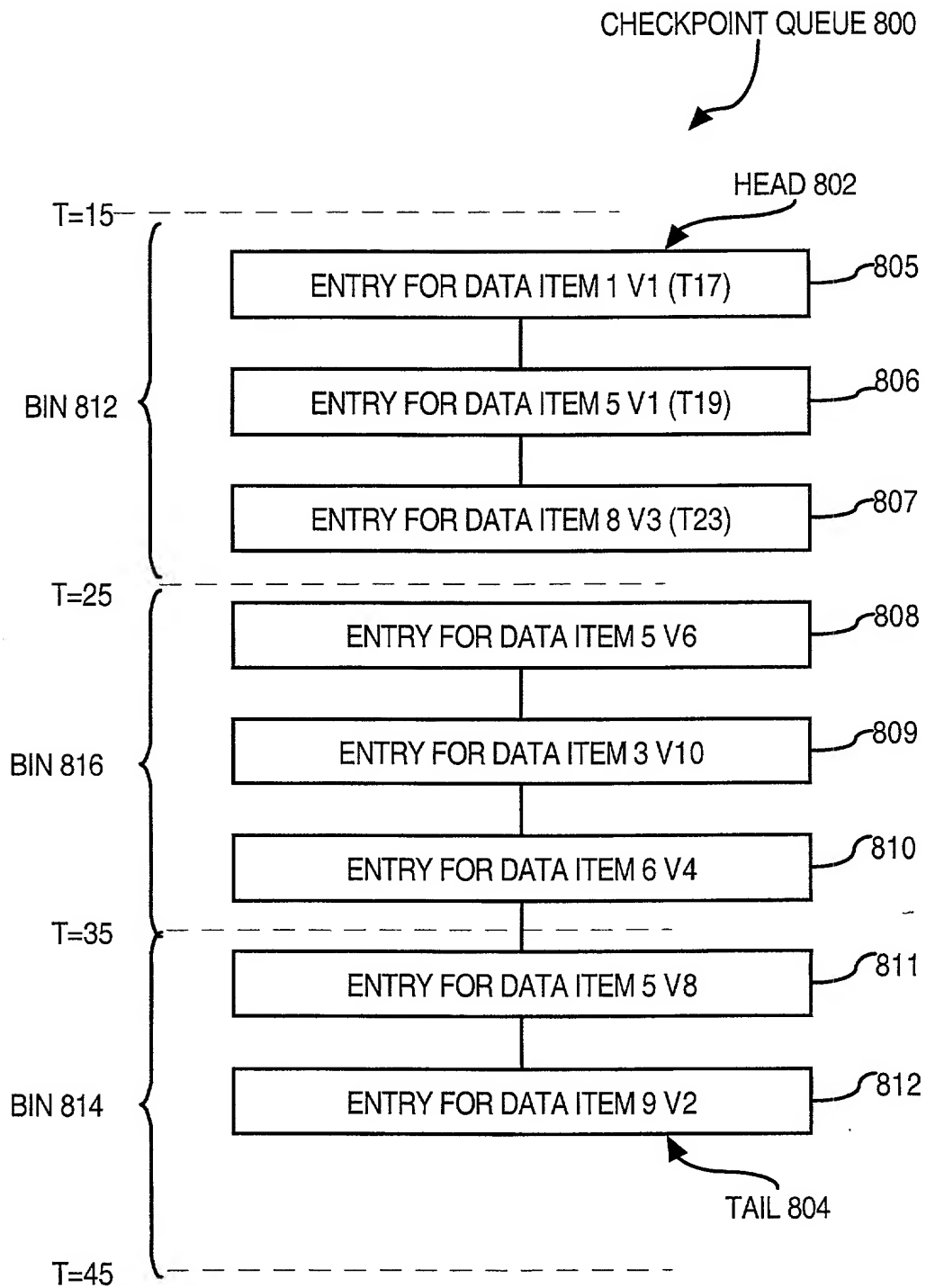
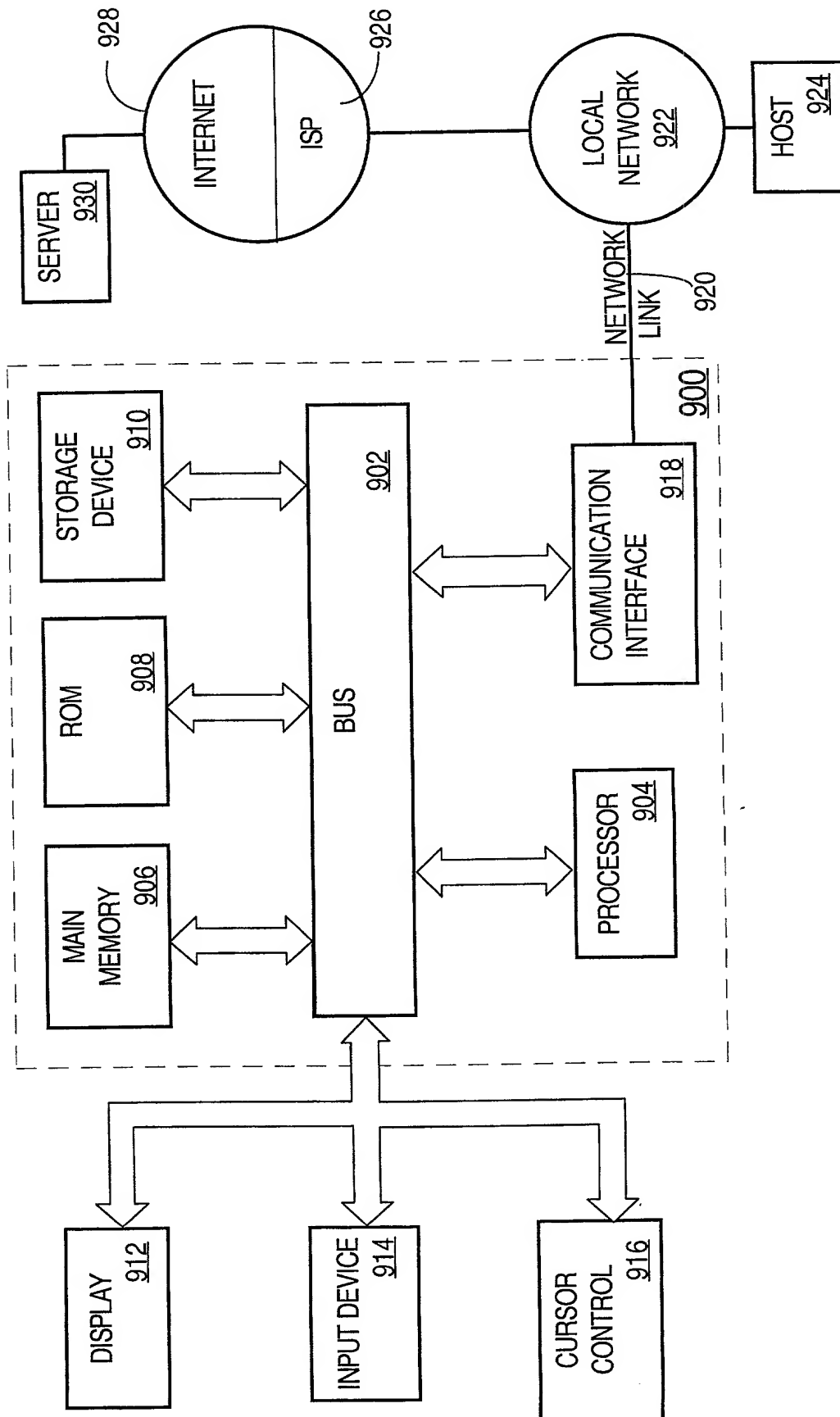


FIG. 7



**FIG. 8**

FIG. 9



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